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PROJECT NO. 52373

REVIEW OF WHOLESALE ELECTRIC MARKET DESIGN	**§ §**	**PUBLIC UTILITY COMMISSION OF TEXAS**

COMMENTS OF RESIDEO TECHNOLOGIES, INC.

I. EXECUTIVE SUMMARY

As a Demand Response ("DR") provider in the Electric Reliability Council of Texas, Inc. ("ERCOT"), Resideo thanks the Commission for the opportunity to provide insight and recommendations for improving ERCOT's current residential demand response programs. DR provides critical reliability benefits by lowering the likelihood and consequences of forced outages that impose financial costs and inconvenience on customers, and lowering wholesale market prices by averting the need to use the most costly-to-run power production facilities during periods of high demand or instances of extreme weather.

Resideo, previously under the brand WeatherBug and Whisker Labs, has been participating in Texas residential DR programs since 2012. After entering the wholesale markets in 2010, Resideo has grown to become one of the leading load aggregation providers with participation in almost every residential smart thermostat program in the United States. Resideo is one of the largest aggregators in the ERCOT market, with over 90 megawatts ("MW") of load under its control.

ERCOT has an incredible amount of installed DR capacity that is ready to be deployed. The full value of these resources can easily be realized by both the market operator and consumers through the implementation of small changes to the current rules and procedures. As the rules currently stand, both aggregators and customers lack incentives for participation. The Commission should focus its efforts on working with smart thermostat manufacturers to realize the potential of this resource for the benefit of all consumers in Texas.

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COMMENTS OF RESIDEO TECHNOLOGIES, INC.

Resideo Technologies, Inc. ("Resideo") hereby files these Comments in response to the Questions for Comment filed in the above-captioned proceeding on September 2, 2021 by the Public Utility Commission of Texas ("Commission"). Resideo is a thermostat Original Equipment Manufacturer ("OEM") and a demand response ("DR") provider offering distributed energy resource and advanced energy management services and technologies for residential and industrial customers.

I. RESIDEO'S RESPONSES TO THE COMMISSION'S REQUEST FOR COMMENTS

1. Describe existing and potential mechanisms for residential demand response in the ERCOT market.

ERCOT's current market design provides two general categories of opportunities for demand response participation: (1) operations-based programs, including Responsive Reserve ("RRS") and Emergency Response Service ("ERS"); and (2) economic programs, including those administered by Transmission/Distribution Service Providers ("TDSPs"). ERCOT's market design includes several opportunities for load serving entities ("LSE") to participate in operations-based programs, but market design improvements are needed for greater participation in economic-based programs. The main driver for low participation is a lack of customer incentives.

a. Are consumers being compensated (in cash, credit, rebates, etc.) for their demand response efforts in any existing programs today, and if not, what kind of program would establish the most reliable and responsive residential demand response?

Residential DR programs are generally administered through an electricity distribution

utility or retail electricity provider ("REP"), and serve to reduce consumption by automatically changing thermostat setpoints during periods of load control. Economic-based programs typically provide end-use customers with incentives for participation separate from the retail electricity rate. However, attracting customers in the absence of meaningful incentives has become a roadblock for many REPs and OEMs in ERCOT.

REP programs typically compensate customers for DR by providing free connected thermostats. OEMs incentivize customers by providing free access to OEM-sponsored energy efficiency programs (e.g., Resideo's Energy Care Energy Efficiency service). However, bill savings from these incentives, if any, are small. With very limited incentives for participation, the REPs and OEMs are hesitant to engage with customers out of fear that any communication with participants will drive opt-outs from the programs. Limited incentives combined with the burden of responsibility to participate in the program work together to significantly reduce participation. To combat this, the Commission should develop incentives that ensure that the burden of participation is low, and the cost savings are significant enough to incentivize changes in behavior. The best route to achieve this goal is to design programs for those entities acting on behalf of customers, namely, OEMs, as well as REPs with aggregations of residential DR.

The leading smart thermostat vendors collectively have at least 500,000 eligible smart thermostats already installed in customer homes and ready to be deployed within the ERCOT regional footprint. The Commission should consider programs to directly incentivize smart thermostat OEMs because those companies already have an existing relationship with the customer who purchased their product, and would be interested in residential DR solely by virtue of purchasing a smart thermostat. OEMs experience less turnover than REPs, and can trigger curtailment remotely without direct customer action (i.e. decreasing a customer's thermostat by

two degrees).

The Commission should also consider the option of providing direct customer enrollment incentives, such as a $100 sign-on bonus, and working directly with OEMs to incentivize participation.

b. Do existing market mechanisms (e.g. financial cost of procuring real time energy in periods of scarcity) provide adequate incentives for residential load serving entities to establish demand response programs? If not, what changes should the Commission consider?

No, the ERS and TDSP program payment structures are disconnected from the value delivered by DR resources. The lack of adequate incentives is the main reason why OEM and REP participation is low in these programs, compared to the potential participation of connected residential loads. The few REPs that do participate in residential DR programs in Texas are large, diversified companies, yet even those companies typically have less than 15 megawatts ("MW") under management. Thermostat OEMs participate in the programs, but in a limited way, as the economic structure of these programs (i.e., the lack of financial incentives) prevent them from growing to scale by attracting a significant customer base. DR is utilized for providing benefits during extreme weather events, however, ERCOT and the TDSP's continue to not compensate the product accordingly for providing those services, thereby eliminating incentives for participation. If ERCOT and the TDSP programs more closely aligned their payments to actual value delivered, the DR aggregators and thermostat OEMs would generate enough revenue that they would be able to properly incentivize customers to enroll in DR programs.

As detailed in Resideo's August 16, 2021 comments, the Commission should consider implementing the following changes:

- Modify ERCOT's ERS program by increasing payments per MW to more closely track with delivered capacity value. This would provide adequate incentives to

enable REP providers to increase customer enrollment.

- Increase the total ERS program budget from its current $50 million annual cap. As more resources are added to DR programs, this budget significantly curtails the compensation that each resource can receive for the services it provides.

- Compensate OEMs through ERS in a manner that provides incentives for enrollment.

- Connect the ERS payment structure to the value delivered by DR resources and compensate based on actual performance in real-time.

- Increase the budget and payment per kW of the TDSP programs so that REPs and OEMs can incentivize customers to participate in the programs.

2. What market design elements are required to ensure reliability of residential demand response programs?

a. What command/control and reporting mechanisms need to be in place to ensure residential demand response is committed for the purpose of a current operating plan (COP)?

ERCOT should rely on advanced metering infrastructure ("AMI") for data management and dispatch capabilities. AMI provides utilities with the ability to automatically and remotely measure electricity use and offer time-based rate programs and incentives. AMI has already been extensively deployed throughout Texas through an integrated system of smart meters.

b. Typically, how many days in advance can residential demand response commit to being available?

Smart thermostats are capable of responding to dispatch within ten (10) minutes.

3. How should utilities' existing programs, such as those designed pursuant to 16 TAC § 25.181, be modified to provide additional reliability benefits?

a. What current impediments or obstacles prevent these programs from reaching their full potential?

The Commission should increase the annual budget and the per kW payment of the TDSP demand response programs. The TDSP DR programs offer the most direct path to developing large residential load control programs for the reliability of the Texas grid.

4. Outside of the programs contemplated in Question 3, what business models currently exist that provide residential demand response?

a. What impediments or obstacles in the current market design or rules prevent these types of business models from increasing demand response and reliability?

Please see response to Question 1.

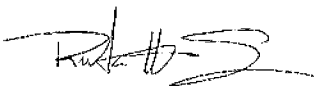
5. What changes should be made to non-residential load-side projects, programs, or what programs should be developed to support reliability in the future?

The Commission should significantly increase ERCOT's annual budget for ERS procurement to be more than the current limit of $50 million. Additionally, Resideo encourages the Commission to consider introducing a new weather-sensitive ancillary service product that includes meaningful opportunities for DR and DER participation. Such a product should be capable of accommodating weather-sensitive loads, including generation and non-generation resources. A weather-sensitive product would allow both industrial and residential demand response to provide immediate benefits by capitalizing on the capability of DR to provide value during hours of peak demand.

II. CONCLUSION

Resideo appreciates the opportunity to provide these Comments and looks forward to working with the Commission and other interested parties on these issues.

Respectfully submitted,



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